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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,376	01/05/2004	Gerrit Willem Hiddink	2	2650

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EXAMINER	
VO, NGUYEN THANH	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/751,376	HIDDINK, GERRIT WILLEM	
	Examiner	Art Unit	
	Nguyen Vo	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,11,13-18 and 22-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,11,13-18 and 22-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-7, 11, 13-16, 18, 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Crawford (US 2003/0002471 A1, cited by examiner).

As to claims 1, 13, 23, Crawford discloses a wireless communication device (see figure 1), comprising a plurality of antennas A1-A6; and a predictive antenna selector that evaluates a signal quality of each of said plurality of antennas of at least a portion of one prior frame and selects an antenna to communicate one or more frames based on said signal quality evaluation (see paragraphs [0049], [0079], [0180]). Crawford further discloses that the predictive antenna selector evaluates the signal quality of each of said plurality of antennas based on a weighted schedule (see paragraphs [0155], [0156], [0163], [0165] which clearly discloses that an antenna which has poor signal quality during a previous interval will not be scheduled to be evaluated in the next interval. Since the schedule for each antenna is not fixed, it reads on weighted schedule as claimed).

As to claims 2, 14, see Crawford, paragraphs [0053], [0080].

As to claims 3, 15, see Crawford, paragraphs [0055], [0077], [0086].

As to claims 4, 6, 16, 24, see Crawford, paragraphs [0154]-[0156], [0163], [0165].

As to claims 7, 18, see Crawford, paragraph [0168].

As to claims 11, 22, see Crawford, paragraph [0060].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5, 17, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford.

As to claims 5, 17, 25, Crawford does disclose removing a given antenna from evaluation if the signal quality of the given antenna is below a signal quality of a remainder of the plurality antennas (i.e., removing worst quality antenna as disclosed at paragraphs [0154]-[0156], [0163], [0165]). Crawford, however, fails to disclose removing a given antenna from evaluation if the signal quality of the given antenna is below a signal quality of a remainder of the plurality antennas by a predefined amount as claimed. However, those skilled in the art would have recognized that the above difference would not render the claims patentable Crawford because it would merely depend on which conditions one would like to remove a given antenna from evaluation. In addition, the examiner takes Official Notice that such a teaching is known in the art as

hysteresis technique (see also the present specification, page 7 lines 11-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Crawford as claimed, such that a given antenna is removed from evaluation if the signal quality of the given antenna is below a signal quality of a remainder of the plurality antennas by a predefined amount, in order to avoid ping-pong or bouncing effect (i.e., a worst quality antenna becomes a better quality antenna in a very short period of time).

Response to Arguments

5. Applicant's arguments filed 4/22/2007 have been fully considered but they are not persuasive.

Regarding independent claims 1, 13 and 23, applicant argues that Crawford fails to disclose that the predictive antenna selector evaluates the signal quality of each of said plurality of antennas based on a weighted schedule. The examiner, however, disagrees. Crawford does disclose that the predictive antenna selector evaluates the signal quality of each of said plurality of antennas based on a weighted schedule (see paragraphs [0155], [0156], [0163], [0165] which clearly discloses that an antenna which has poor signal quality during a previous interval will not be scheduled to be evaluated in the next interval. Since the schedule for each antenna is not fixed, it reads on weighted schedule as claimed).

Regarding dependent claims, they are discussed for the same reasons as set forth above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kogiantis (US 2003/0073444 A1) discloses scheduling of multi antennas.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Vo whose telephone number is (571) 272-7901. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nguyen Vo
Primary Examiner
Art Unit 2618

Nguyen Vo
5/2/2007